



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Reply to:
301 E. Stewart Ave., Rm. 203
Las Vegas, NV 89101

Tel: (702) 388-6125

TO: Charlotte Abrams, HLPD, M/S 4 H 3

FROM: Sr. On-Site Representative's Office, Las Vegas

DATE: January 21, 1994

SUBJECT: STATUS REPORT, I.E., REECo, December, w/Variance Analysis Report

Please find enclosed the above-referenced reports.

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PDR WASTE
WM-11 PDR

NH03-11
WM-11
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Reynolds Electrical & Engineering Co., Inc.

Post Office Box 98521 • Las Vegas, NV 89193-8521

IN REPLY REFER TO:

580-01-189

JAN 14 1994

WBS 1.2.9.1

QA: N/A

Robert M. Nelson, Jr.
Acting Project Manager
Yucca Mountain Site Characterization
Project Office
U.S. Department of Energy
Post Office Box 98608
Las Vegas, NV 89193-8608

INFORMATION COPY

YUCCA MOUNTAIN SITE CHARACTERIZATION (YMP) PROGRESS REPORT (SCP: N/A)

Enclosed is the December YMP Progress Report for Reynolds Electrical & Engineering Co., Inc.'s participation in the YMP. The Variance Explanations (Variance Analysis Reports) are not enclosed and will be submitted under separate cover.

If you have any questions, please contact Dean L. Knight at 794-7400.

R. F. Pritchett, Manager
Yucca Mountain Project Division
YMP Technical Project Officer

RFP:SEW:L9447:mff

Enclosures

1. Progress Report (6 page)
2. Cost/Full-Time Equivalent Report (1 page)

cy: See page 2

TOTAL QUALITY IS OUR BUSINESS

REECo

AN  **EG&G** COMPANY

Robert M. Nelson, Jr.
580-01-189
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cy w/encls.

Information Services Center, M/S 408
M. M. Martin, M&O, M/S 423

cy w/encl. 1.

L. M. Smith, DOE/NV, M/S 505
M. B. Blanchard, DOE/YMP, M/S 523
W. R. Dixon, DOE/YMP, M/S 523
J. R. Dyer, DOE/YMP, M/S 523
C. E. Hampton, DOE/YMP, M/S 523
B. D. Hutchinson, DOE/YMP, M/S 523
V. F. Iorii, DOE/YMP, M/S 523
S. B. Jones, DOE/YMP, M/S 523
E. H. Petrie, DOE/YMP, M/S 523
W. B. Simecka, DOE/YMP, M/S 523
D. R. Williams, DOE/YMP, M/S 523
W. A. Wilson, DOE/YMP, M/S 717
L. D. Foust, M&O, M/S 423
R. L. Robertson, M&O/Fairfax, VA
P. Justus, NRC/Las Vegas, NV
R. C. Furtek, REECo, M/S 706
B. R. Gardella, REECo, M/S 408
W. J. Glasser, REECo, M/S 408
J. L. Henze, REECo, M/S 751
S. L. Hughes, REECo, M/S 408
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S. C. Smith, SAIC, M/S 517/T-10
J. W. Teak, SAIC, M/S 517
J. E. Therien, SAIC, M/S 517

cy w/encl. 2.

R. M. Spiro, SAIC, M/S 517

REYNOLDS ELECTRICAL & ENGINEERING CO., INC.
(REECo)

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT (YMP)

DECEMBER 1993 - PROGRESS REPORT

Reeco has no reportable Level 0 or Level 1 Milestones.

WASTE PACKAGE (1.2.2)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.2.2.4

Task: Fran Ridge Prototype Saw Support (Job Package 93-10)

Supported sawing activities at Fran Ridge. Completed the first phase of drilling with 72 Meters (236 ft) of core hole. Cleaned the drill holes as required in the large block. Transported all drilling equipment back to the ESF pad. Began servicing the drilling equipment. Installed conduit for phone lines at Fran Ridge.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.

SITE (1.2.3)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.3.5

Task: USW UZ-14 Drilling (Job Package 92-17)

Placed 116 cubic feet of Type II Cement in hole through 2-3/8 inch tubing with bottom of tubing positioned at 1424 feet. Cement in place at 2:40 p.m. December 1, 1993. Tagged top of cement at 1313 feet and dressed off top of cement to 1315 feet on December 6, 1993. Received orders to drill cement from 1315 feet to 1325 feet and conditioned hole in preparation to run casing with external casing packer.

Task: Work Program USW NRG-7/7A (Job Package 93-15)

Cored from 554 feet to 883 feet, 6-5/8 inch odex casing at 302 feet. Directional survey at 770 feet, 4 degrees - 5 minutes, S-10-W.

Task: Work Program YMP/WP/93-10, UE-25 C-Hole Complex Testing - Phase 1

Picked up and ran three TAM international Packers on 2-7/8 inch tubing to 2601 feet on C-Hole #2. Bottom packer would not inflate due to leaks in inflation hoses. Pulled packers out of hole and reran packers in hole with stainless steel inflation lines. Rigged down Stratmaster Drill Rig and moved back on C-Hole #3. Pulled packers out of hole to change out inflation lines. Rerunning packers with stainless steel inflation lines.

Task: Work Program YMP/WP/93-17, USW WT-2, Additional Work Activities

Utilizing the LM-300 drill crew from UZ-14. Mobilized the Joy 1 Drill Rig to USW WT-2 and reinstalled tubing in hole. Bottom of well screen at 2039.99 feet. This completes the scope of work in the Work Program.

Task: NRG-5, North Ramp Borehole (Job Package 93-03)

Utilizing the LM-300 drill crew from UZ-14. Mobilized the Joy 1 Drill Rig to NRG-5. Jacked 5 inch casing free, pulled and laid down same. Rigged up to pull 6-5/8 inch casing. Jacked out 10 joints. Bottom of 6-5/8 inch casing at 168.64 feet. Shut down operations, and drill crew returned to LM-300 at UZ-14.

Task: Maintenance & Operations

Continued to provide technical support, equipment checks, and repairs of the USGS Integrated Data Acquisition System (IDAS) Prototype System.

DELIVERABLES:

<u>Deliverable</u>	<u>Due Date</u>	<u>Expected Date</u>	<u>Completed Date</u>	<u>Comments</u>
Drilling of SD-12 Borehole	-	-	-	No activity at this time. Expect to start drilling operations in January 1994.
Drilling of NRG-7 North Ramp Geologic Borehole	-	-	-	Operations ongoing. Expected Completion March 1994.
Drilling UZ-7A Borehole	-	-	-	No activity at this time. No funding identified.
Drilling of Ramp Boreholes NRG-8A, 8B, 8C	-	-	-	No activity at this time.
Drilling of Borehole SD-9	-	-	-	No activity

<u>Deliverable</u>	<u>Due Date</u>	<u>Expected Date</u>	<u>Completed Date</u>	<u>Comments</u>
Support pump testing activities at the C-Hole Complex	-	-	-	Support ongoing on Phase 1. Considerable rework on C-Hole #2 and #3 due to leaking inflation lines.
Support testing and completion on UZ-16 and UZ-14	-	-	-	Testing support ongoing on UZ-16. UZ-14 delayed due to borehole conditions.

ISSUES AND CONCERNS:

None.

EXPLORATORY STUDIES (1.2.6)
PROGRESS DURING REPORTING PERIOD:

WBS 1.2.6.1

Task: Exploratory Studies Facility (ESF)

Continued administrative support for ESF activities to include planning, scheduling, and management.

Task: ESF North Portal Pad & Facilities (Job Package 92-20)

ESF Underground Electrical Duct Banks: Continued excavation of ductbanks and manholes. Excavation was suspended and resumed upon receipt of a construction inspection plan.

Waterline - J-13 to Booster: Completed trench excavation with the exception of access road crossing. Continued cleaning trench bottom and placing and compacting 6-inch sand bedding. Unloaded two trailer loads of 8-inch pipe. Installed 6,000 feet of pipe.

Starter Tunnel Rockbolts/Shotcrete: Pull tested 14 pattern rockbolts. All rockbolts passed. Installed 53 double rockbolt plates and 9 single rockbolt plates on pattern, rockbolts in the Starter Tunnel.

Test Alcove #1 Excavation: Installed 30 split set rockbolts and hung 6-inch welded wire in the Test Alcove as required. Drilled round NP-TA-016. The heading is stopped at C.S. 0+27 Meters (0+90 ft) until the mapping and fibercreting activities are completed. Washed the ribs and the back for the investigators and supported the mapping effort. Set up and started fibercreting the back of Test Alcove #1. Applied 54 bags of fibercrete. Installed 12 Meters (40 ft) of 36-inch ventline.

Construction Monitoring Test Support: Supported installation of Multi Purpose Borehole Extestometer (MPBX) gauges as needed.

Procurement Actions

Purchasing Requisition (PR) 171-JAW-01-4 for a Surface Conveyor System evolved into a Request for Proposal (RFP) (16-BG-94). In response to the Requester, this RFP was extended indefinitely pending design changes. This conveyor system is to be used in conjunction with the Tunnel Boring

Machine which is on scheduled for delivery in April 1994.

DELIVERABLES:

Complete 69KV power line to the ESF Portal temporary Substation (January 3, 1994).
A stop work order was issued on November 19, 1993. The order was removed December 15, 1993.
New expected completion date is February 10, 1994, due to a field change modifying the scope of work at the substation.

ISSUES AND CONCERNS:

No programmatic impact is expected from the delay of the 69KV power line.

TEST FACILITIES (1.2.7)

PROGRESS DURING REPORTING PERIOD:

Task: Field Operations Support

Continued support services to participants and maintenance of YMP utilized facilities, utilities, equipment, and roads in Area 25.

Continued logistical and tour support for DOE Yucca Mountain Site (YMSO) staff. Eleven tours and one Open House were held during this period. Support included but was not limited to arrangements for buses, registration of guests, coordination of lunches/beverages, medical service, furniture, and mechanical service. Continued preparations for upcoming tours.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.

PROJECT MANAGEMENT (1.2.9)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.9

Task: Technical Project Office Management/Project Control

Continued normal administrative level of effort support. Continued status and update of Planning and Control System (PACS); supported ESF construction and drilling activities; and completed cost estimates as required.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.

QUALITY ASSURANCE (1.2.11)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.11

Task: Quality Assurance (QA)

Issued a Stop Work Notice with Corrective Action Report (CAR) CA-94-003 to stop all quality affecting field survey activities in the YMP Division. YMP qualification and required training of REECo survey personnel were not completed by the date provided in response to DOE Corrective Action Request YM-93-058.

Conducted REECo Audit No. REECo-002-94 of Training and Qualification activities. The audit resulted in issuance of two minor Deficiency Notices. The REECo Training and Qualification program was determined to be effective and adequate for current activities.

Assisted DOE during the audit of REECo (Audit No. YMP-94-02). No deficiencies were identified during the audit of REECo procurement and material control activities.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.

ENVIRONMENT, SAFETY & HEALTH (1.2.13)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.13

Task: Safety & Occupational Health

Provided medical, occupational safety, industrial hygiene, and fire protection support.

Full Industrial Hygiene services continue to be provided for the Yucca Mountain Project. Daily work activities are evaluated and monitored for health hazard concerns.

Underground Worker Safety Training Program Lesson plan modifications were submitted for updating into a revised training document for YMP. The Job Safety Analysis (JSA) worksheet "Handling of Cement-Laden Drill Cuttings", dated November 26, 1993, was reviewed by Industrial Hygiene. This JSA created by a REECo YMP Safety Professional, was used as the focal point for a Pre-work safety meeting held at the surface drill-site UZ-14. Specific topics covered were necessary Personal

Protective Equipment and the Material Safety Data Sheets (MSDS) on Portland cement. Industrial Hygiene then monitored the cement plug removal with the handling of cement-laden drill cuttings at UZ-14.

Survey measurements for air quality and humidity were made during the following ESF operations: scaling, cleanup, mapping, and shotcreting inside the Test Alcove and at the outside perimeter of the North Portal Starter Tunnel. Noise surveys were conducted around the electrical generator located next to the United States Geological Survey (USGS) S-8 trailer, at the Exploratory Studies Facility pad. "Caution Hearing Protection Required" decals were affixed on the generator No. 065 C 016. Follow-up investigation was initiated by industrial hygiene for an incident involving two employees exposed to a highly alkaline cement that resulted in skin burns. The investigation was completed in December 1993.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.

SUPPORT SERVICES (1.2.15)

PROGRESS DURING REPORTING PERIOD:

WBS 1.2.15

Task: Administrative Support and Training

Continued to provide procurement, logistical, and information management administrative level of effort support; and continued support services to various YMP participants.

Staffed the YMP technical information display at the American Geophysical Union Conference in San Francisco, California.

Task: Site Characterization Plan (SCP) Reference Library and Database

Continued distribution and database maintenance for the SCP and Progress Reports. Distributed one copy of Progress Report No. 6 and 7.

DELIVERABLES:

None.

ISSUES AND CONCERNS:

None.



INFORMATION COPY
Reynolds Electrical & Engineering Co., Inc.

Post Office Box 98521 • Las Vegas, NV 89193-8521

IN REPLY REFER TO:

580-01-210

WBS 1.2.9.1

QA: N/A

JAN 19 1994

Robert M. Nelson, Jr.
Acting Project Manager
Yucca Mountain Site Characterization
Project Office
U.S. Department of Energy
Post Office Box 98608
Las Vegas, NV 89193-8608

YUCCA MOUNTAIN SITE CHARACTERIZATION (YMP) PROGRESS REPORT (SCP: N/A)

Enclosed are the Variance Analysis Reports for the December YMP Progress Report as stated in our Letter Number 580-01-189, subject above, dated January 14, 1994.

If you have any questions, please contact Dean L. Knight at 794-7400.

R. F. Pritchett, Manager
Yucca Mountain Project Division
YMP Technical Project Officer

RFP:SEW:L9450:mff

Enclosure
Variance Analysis Reports (14 pages)

cy: See page 2

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580-01-210
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S. C. Smith, SAIC, M/S 517/T-10
R. M. Spiro, SAIC, M/S 517
J. W. Teak, SAIC, M/S 517
J. E. Therien, SAIC, M/S 517

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 14 January 1993**

PARTICIPANT: REECO PEM: DLUGOSZ WBS: 1.2.3.3.1.2.4

WBS TITLE: Percolation in the Unsaturated Zone - ESF Study

P&S ACCOUNT: OR33124

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
246	120	54	-126	-51.2	48.8	0	0.0	0.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance: The activity is dependent upon the completion of Test Alcove No. 1 excavation. The completion of Test Alcove #1 has slipped, therefore, the commencement of drilling 3 radial boreholes will not start as planned.

No project milestones were impacted and no other participants were significantly affected at this time.

Variance At Complete:

M. Howard 1/18/94
 P&S ACCOUNT MANAGER DATE

R. Fitchest 1/19/94
 TPO DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 14 January 1993**

PARTICIPANT: REECO PEM: LONG WBS: 1.2.3.5.2.1

WBS TITLE: Common-To-Drilling Support

P&S ACCOUNT: OR3521

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SVZ	SPI	CV	CVZ	CPI	BAC	EAC	VAC	VACZ	IEAC	TCPI
0.0	0.0	0.0	0.0	0.0	0.0	106	11.3	112.7	0	0	0	0	0	0

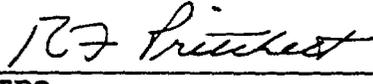
Analysis

Cumulative Cost Variance: On an annualized basis this cost underrun is 2 percent under budget projections. The month-to-month costs are showing both cost overruns and underruns so an underrun trend is not indicated. The time-phased budget projections relative to when actual costs are incurred are creating a cost variance. No project milestones were impacted and no other participants were significantly affected.

No project milestones were impacted and no other participants were significantly affected at this time.

Cumulative Schedule Variance:

Variance At Complete:

	
1-18-94	1/19/94
_____ P&S ACCOUNT MANAGER	_____ TPO
DATE	DATE

Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 14 January 1994

PARTICIPANT: REECO PEM: LONG WBS: 1.2.3.5.3.5

WBS TITLE: UZ, Vert. and Seis. Prof., & Prot Drillholes and Tests

P&S ACCOUNT: OR3535

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
0.0	0.0	0.0	0.0	0.0	0.0	252	50.4	201.6	900	680	220	24.4	446	92.6

Analysis

Cumulative Cost Variance: Drilling progress was inhibited due to field conditions encountered requiring a scope of work change to address water investigation and cementing operations. The cost of this activity will be revised to reflect a modified scope of work. In addition, an accounting adjustment of \$70K was credited to the account.

Cumulative Schedule Variance:

Variance At Complete: FY94 budget distribution allocated funds to unestablished PACS Account for WBS 1.2.3.5.3.23 for \$150K causing a cost variance. Subsequently, funding transfers of \$75K (per Roy Long) to WBS 1.2.3.5.3.11 and \$75K to WBS 1.2.3.5.3.17. An accounting adjustment of \$70K was credited to this account and will create an artificial variance at completion.

CP Johnson 1-18-94
 P&S ACCOUNT MANAGER DATE

RF Ditcher 1/19/94
 TPO DATE

**Yucca Mountain Site Characterization Project
Variance Analysis Report
Status Thru: 14 January 1993**

PARTICIPANT: REECO PEM: LONG WBS: 1.2.3.5.3.11

WBS TITLE: Multiple Well Interference Tests at C-Hole Complex

P&S ACCOUNT: OR353B

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SVZ	SPI	CV	CVZ	CPI	BAC	EAC	VAC	VACZ	IEAC	ICPI
0.0	0.0	0.0	0.0	0.0	0.0	0.0	00.0	00.0	549	624	-75	-13.7	784	99.5

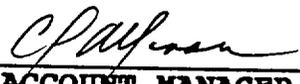
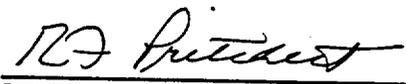
Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Variance At Complete: Funding transfer of \$75K from WBS 1.2.3.5.3.23 to WBS 1.2.3.5.3.11 to support this activity created this variance.

No project milestones were impacted and no other participants were significantly affected at this time.

	<u>1-18-94</u>		<u>1/19/94</u>
P&S ACCOUNT MANAGER	DATE	TPO	DATE

**Yucca Mountain Site Characterization Project
Variance Analysis Report
Status Thru: 31 DEC 93**

PARTICIPANT: REECo **PEM:** **WBS: 1.2.6.1.1**
WBS TITLE: **Management Planning and Technical Assessment**
P&S ACCOUNT: **OR611**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
237	237	119	0	0.0	0.0	118	49.8	199.2	2448	1698	750	30.6	1229	140.0

Analysis

Cumulative Cost Variance:

Straight-line distribution method used in initial planning phase. Unable to ramp-up personnel as originally planned. Expect work load in increase in second half of fiscal year. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Expected ramp-up will eliminate variance.

Cumulative Schedule Variance:

Variance At Complete:

C/SCR's are in process to transfer \$70K to T&MSS, and \$680K within REECo to Summary Acct# OR6224D4B for the waterline; which explains the \$750K projected underrun at completion. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Summary Account will be replanned when C/SCR is approved.

Tom Leonard 1/18/94
P&S ACCOUNT MANAGER DATE

RD Treaster 1/19/94
TPO DATE

**Yucca Mountain Site Characterization Project
Variance Analysis Report
Status Thru: 31DEC93**

PARTICIPANT: REECo **PEM:** Gardiner **WBS:** 1.2.6.2.1.4
WBS TITLE: **General Roads and Drainage Systems**
P&S ACCOUNT: **0R6214**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
161	9	-12	-152	-94.4	5.6	0	0.0	0.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Environmental Stipulation Letter not received from the M&O, which is a prerequisite for construction of the Conveyor Service Road. The ESF Surface Conveyor design is undergoing modification. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Replan Summary Account ^{and} begin construction after receipt of the Environmental Stipulation Letter and design modification.

Variance At Complete:

M Konrad 1/18/94
P&S ACCOUNT MANAGER DATE

RJ Fritcher 1/19/94
TPO DATE

**Yucca Mountain Site Characterization Project
Variance Analysis Report
Status Thru: 31DEC93**

PARTICIPANT: REECO **PEM:** Gardiner **WBS:** 1.2.6.2.2.1
WBS TITLE: **Surface Util/Communications - First Access Area**
P&S ACCOUNT: **OR6221**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
647	134	113	-513	-79.3	20.7	0	0.0	0.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Capital Equipment summary account expected costs in November did not occur causing variance. Capital Equipment consists of electrical components for providing temporary electrical power on the ESF Pad.

Temporary power on the pad has not started because the scope of work is not finalized. In November, excavation of the Duct Banks had been delayed because design release was modified through the FCR process. On January 7, 1994 Design Package 1B was released for construction without releasing the Ductbank drawings in their entirety. This will curtail construction progress in January compared to the baseline.

Design for the Sanitary Sewer has not been released for construction.

No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project.

Re-evaluation of the schedule will be accomplished when designs are released.

Variance At Complete:

<i>M. Leonard</i>	<i>1/28/94</i>	<i>R. F. Pritchett</i>	<i>1/19/94</i>
_____ P&S ACCOUNT MANAGER	_____ DATE	_____ TPO	_____ DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 31DEC93**

PARTICIPANT: REECo **PEM:** Replogle **WBS:** 1.2.6.2.2.5.2
WBS TITLE: Permanent Power Supply - 138KV Transmission Line
P&S ACCOUNT: 0R62252

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
295	0	0	-295	-100.0	0.0	0	0.0	0.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Capital Equipment summary account expected costs in December did not occur causing variance. Capital requirements supporting the 138KV Transmission Line are under M&O review and may be modified. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Summary Account will be replanned when equipment requirements are finalized.

Variance At Complete:

M. Howard 1/18/94
 P&S ACCOUNT MANAGER DATE

R. F. Pritchett 1/19/94
 TPO DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 31DEC93**

PARTICIPANT: REECO **PEM:** Gardiner **WBS:** 1.2.6.3.1.1
WBS TITLE: **Bldgs/Surface Facilities - First Access Area**
P&S ACCOUNT: **0R6311**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
177	0	0	-177	-100.0	0.0	0	0.0	0.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Design for Switchgear Building foundation was released for construction on December 14, 1993 permitting the excavation activity (baselined in October 1993) to commence in January, 1994. Also, the ESF Pad layout is being modified for muck handling and enlargement which impacts placing a temporary Portal Control Fence. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. We will replan erection of the Portal Control Fence after release of design.

Variance At Complete:

MM Howard 1/18/94
 P&S ACCOUNT MANAGER DATE

RF Brubaker 1/19/94
 TPO DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 31DEC93**

PARTICIPANT: REECo **PEM:** Gardiner **WBS:** 1.2.6.3.1.4
WBS TITLE: Bldgs/Surface Facilities - Other Locations
P&S ACCOUNT: 0R6314

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
401	241	220	-160	-39.9	60.1	0	0.0	0.0	0	0	0	0.0	0.0	0.0

Analysis

Cumulative Cost Variance:

Cumulative Schedule Variance:

Capital Equipment summary account expected costs in December did not occur causing variance. Final delivery of trailers has not been completed which precludes completion of installation. Installation of Tonopah Test Range Trailers was scheduled, but not funded in FY94. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Re-evaluation of schedule and funding availability when balance of trailers are received.

Variance At Complete:

<u>Tom Leonard</u>	<u>1/18/94</u>	<u>RJ Pritchett</u>	<u>1/19/94</u>
P&S ACCOUNT MANAGER	DATE	TPO	DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 31DEC93**

PARTICIPANT: REECo **PEM:** Gonzalez **WBS:** 1.2.6.4.1
WBS TITLE: **First Access Portal/Collar and Plant Setup**
P&S ACCOUNT: **OR641**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
756	663	456	0	0.0	0.0	207	31.2	145.4	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

A tunnel maintenance support activity including underground rescue capability is to be provided for the ESF at the completion of Test Alcove #1 excavation. Excavation of the Test Alcove #1 is not completed delaying the start of this activity causing a cost variance. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. Variance will be eliminated during the fiscal year.

Cumulative Schedule Variance:

Variance At Complete:

<i>M Howard</i>	<i>1/18/94</i>	<i>RD Pretorius</i>	<i>1/19/94</i>
_____ P&S ACCOUNT MANAGER	_____ DATE	_____ TPO	_____ DATE

**Yucca Mountain Site Characterization Project
 Variance Analysis Report
 Status Thru: 31DEC93**

PARTICIPANT: REECO **PEM:** Gonzalez **WBS:** 1.2.6.4.4
WBS TITLE: **First Access Construction Test Support**
P&S ACCOUNT: **0R644**

FY 1994 Cumulative to Date									FY 1994 at Completion					
BCWS	BCWP	ACWP	SV	SV%	SPI	CV	CV%	CPI	BAC	EAC	VAC	VAC%	IEAC	TCPI
210	210	25	0	0.0	0.0	185	88.1	840.0	0	0	0	0.0	0	0.0

Analysis

Cumulative Cost Variance:

Delays due to test interference have not occurred as planned due to reduced activity in the Starter Tunnel and Alcove. No project milestones were impacted, and no other participants were significantly affected. Expect no impact to project. No corrective action required.

Cumulative Schedule Variance:

Variance At Complete:

Tom Howard 1/18/94
 P&S ACCOUNT MANAGER DATE

RT Pritchett 1/19/94
 TPO DATE